

retransmitting the communication signal from the small satellite antenna, the earth station comprising:

a first large satellite antenna directed to a first one of the plurality of adjacent geostationary satellites;

a second large satellite antenna directed to a second one of the plurality of adjacent geostationary satellites; and

a receiver for receiving communication signals at one of said first and second antennas, said receiver including an antenna switch selector for selectively activating said first and said second antennas, the selector activating the second antenna only during periods when the sun transits within a beamwidth of said first antenna.

REMARKS

In the last Office Action, the Examiner maintained the rejections of claims 1-8 as being unpatentable over U.S. Patent No. 5,940,753 to Mallinckrodt ("Mallinckrodt") in view of U.S. Patent No. 3,836,969 to Bond et al. ("Bond"). Applicant respectfully traverses these rejections.

Applicant cancels claim 7 without prejudice or disclaimer. Applicant amends claim 8 to more appropriately describe the present invention. No new matter is added by this amendment. Claims 1-6 and 8 are thus pending in this application following entry of this Amendment.

With respect to claim 1, this claim is directed to a combination of elements including a first satellite antenna for generating a wide beam communication signal to illuminate a plurality of satellites, means for generating a return communication signal from each of the plurality of satellites, a second satellite antenna for receiving the return

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communication signal from only one of the plurality of satellites, and a satellite antenna repositioning system for repositioning said second antenna when the sun transits within a beamwidth of said second antenna. The Examiner asserts that Mallinckrodt, in view of Bond, teaches all of these claimed elements. Applicant respectfully disagrees.

As the Examiner admits, Mallinckrodt fails to teach a satellite antenna repositioning system for repositioning the second antenna when sun transits within the beamwidth of the second antenna. The Examiner asserts, however, that Bond teaches the repositioning of an antenna when the sun transits within the bandwidth of the antenna and thus, it would have been obvious to one of ordinary skill to apply the teachings of Bond to Mallinckrodt.

The Examiner fails, however, to refer to any teaching, suggestion, or motivation to combine the teachings of the references. In fact, the references teach against such a combination. One purpose for providing a satellite communication system including a satellite antenna repositioning system is to improve service by eliminating outages caused by transit of the sun. Mallinckrodt, however, is directed to a communications system having both satellite and surface nodes. [See Abstract.] Surface nodes are unaffected by sun transit outages, and thus communications remain uninterrupted. One of ordinary skill in the art, therefore, would not have any motivation to combine Mallinckrodt with Bond. Claim 1 is therefore patentable over the cited references.

Claim 2 is patentable, at least, based on its dependence from claim 1.

Claim 3 recites, among other things, "a third satellite antenna, directed to a second one of the plurality of satellites located proximate to said first satellite, for receiving said return communication signal from said second satellite only during sun

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transit outages of said second antenna." First, neither Mallinckrodt nor Bond teach or suggest a third antenna. Second, although the Examiner asserts that directing a third satellite antenna is obvious in light of directing a second satellite antenna, the Examiner fails to point to any portion of the references that teaches or suggests that the third satellite antenna is used only during sun transit outages of the second antenna. Third, as noted with respect to claim 1, there is no motivation to combine Mallinckrodt and Bond. Mallinckrodt includes both surface and satellite nodes, thus obviating the need to combine the reference with Bond. Claim 3 is therefore patentable over the cited references.

Claim 4 is patentable, at least, based on its dependence from claim 3.

Claim 5 is patentable for reasons similar to those discussed with respect to claim 1. Specifically, there is no motivation to combine the Mallinckrodt and Bond references. In fact, Mallickrodt teaches against this combination, as Mallinckrodt includes both surface and satellite nodes. The system of Mallinckrodt, then, is not affected by sun transit outages, and thus, there is no motivation to combine the Bond teachings with the system of Mallinckrodt.

Claim 6 is patentable for reasons similar to those discussed with respect to claim 3. As discussed with respect to claim 3, neither Mallinckrodt nor Bond teach a third antenna, as is recited in claim 6. Further, neither Mallinckrodt nor Bond teach receiving with the third antenna when the sun is within the beamwidth of the first satellite. Finally, there is no motivation to combine Mallinckrodt and Bond, as described with respect to claims 1, 3, and 5. Claim 6 is therefore patentable over the cited references.

Claim 8 recites, among other things,

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a receiver for receiving communication signals at one of said first and second antennas, said receiver including an antenna switch selector for selectively activating said first and said second antennas, the selector activating the second antenna only during periods when the sun transits within a beamwidth of said first antenna.

The Examiner asserts that Bond teaches this element. Nothing in Bond, however, teaches or suggests that the selector activates the second antenna only during sun transit outages. Moreover, there is no motivation to combine Mallinckrodt and Bond. Particularly, Mallinckrodt teaches a communications system including surface and satellite nodes. Therefore, there is no motivation to combine Mallinckrodt with Bond to avoid sun transit outages. Claim 8 is therefore patentable over the cited references.

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-6 and 8 in condition for allowance. Applicant submits that the proposed amendment of claim 8 does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, applicant submits that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

Applicant submits that the claimed invention is not anticipated or rendered obvious in view of the prior art references cited against this application. Applicant

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therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: July 11, 2001

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APPENDIX TO THE AMENDMENT AFTER FINAL OF July 10, 2001

Claim 8. (Twice Amended) An earth station for use in a point-to-multipoint communication system including a small satellite antenna for transmitting a wide beam communication signal and a plurality of adjacent geostationary satellites for retransmitting the communication signal from the small satellite antenna, the earth station comprising:

a first large satellite antenna directed to a first one of the plurality of adjacent geostationary satellites;

a second large satellite antenna directed to a second one of the plurality of adjacent geostationary satellites; and

a receiver for receiving communication signals at one of said first and second antennas, said [second] receiver including an antenna switch selector for selectively activating said first and said second antennas, the selector activating the second antenna only during periods when the sun transits within a beamwidth of said first antenna.

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